Question Paper
ANMC Mock Test Class 7 - Algebra (Paper 2)

Exam ID : TEST/2024/01/05134456 Report Generation Date : 3/26/2024 3:02:06 PM

Q1: If x + 1/x + 2 = 0 then the value of (x+3)2 + 1/(x+3)2 is:

A: 4

B: 4 3/4

C: 4 1/4

D: 4 1/2

Answer: C

Q2: If (x - y) = 5 then what is the value of (x -11)3 - (y - 6)3?

A: 293

B: 124

C: 0

D: 525

Answer: C

Q3: If x + 1/x = 3 then the value of x12 + 1/x12 is:

A: 104520

B: 103682

C: 100235

D: 15432

Answer: B

Q4: If x + 1/x = 3 then the value of x3 - 1/x3 is:

A: sqrt(5)

B: 8 sqrt(5)

C: 27

D: 30

Answer: B

Q5: If a = 35, b = 37 and c = 40 then find a3 + b3 + c3 - 3abc - 2121

A: 7

B: 0

C: 4

D: 5

Answer: A

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Q6: If a + b + c = 5 and a2 + b2 + c2 = 12 and 1/a + 1/b + 1/c = 3 then find abc.

A: 12/5

B: 15/7

C: 13/6

D: 16/7

Answer: C

Q7: If (p - q) = 7 then what is the value of (p - 24)3 - (q - 17)3?

A: 0

B: 1

C: -3

D: -1

Answer: A

Q8: If 18% of(x - 3) = 0.36 then the value of x is:

A: 3

B: 1

C: 6

D: 5

Answer: D

Q9: If x2 - (1/3)x - 1 = 0, then find x3 - 1/x3

A: 27/28

B: 28/27

C: 29/26

D: 26/29

Answer: B

Q10: If x1/2 + 1/x1/2 = 2 then find the value of 6x2 + 1/6x2

A: 37/6

B: 6

C: 35/6

D: 31/6

Answer: A

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Q11: If a3 – b3 = 38 and a – b = 2 then find the value of a2 + b2

A: 15

B: 16

C: 14

D: 12

Answer: C

Q12: If 81a4 + 225a2b2 + 625b4 = 85 and 9a2 + 15ab + 25b2 = 17 then find the value of 3a+5b.

A: 241/2

B: 251/2

C: 261/2

D: 231/2

Answer: D

Q13: If a2 – b2 + c2 = 0, then the value of 2(a6 + c6 – b6)/3(a2 + c2):

A: a2c2

B: -2a2c2

C: 2a2b2

D: -b2c2

Answer: B

Q14: If a + b + c = 21, then find the value of
(a – 3)3 + (b – 6)3 + (c – 12)3 – 3(a – 3)(b – 6)(c – 12) + 1

A: 0

B: 2

C: -2

D: 1

Answer: D

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Q15: If x4 + x-4 = 47 then find the value of (x + x-1) – 3

A: 0

B: 3

C: -2

D: 1

Answer: A

Q16: If 25x2 + 49y2 + 16z2 + 30 = 40x – 42y + 40z – 20, then the value of (7y + xz) will be:

A: -1

B: 3

C: 0

D: -2

Answer: D

Q17: If a2 + b2 + c2 = 29 and ab + bc + ca = 10 then find the value of
(1/2)(a + b + c)[(a – b)2 + (b – c)2 + (c – a)2]

A: 132

B: 133

C: 130

D: 135

Answer: B

Q18: If x + y = 12 and xy = 10 then find the value of 1/x2 + 1/y2

A: 1.20

B: 1.32

C: 1.28

D: 1.24

Answer: D

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Q19: Simplify: a/(a-b) + b/(b-a) – 1

A: -2

B: 0

C: 1

D: 3

Answer: B

Q20: If x + 1/x = 3 then find the value of x3 – 1/x3 – 8×(5)1/2

A: –1

B: 2

C: 0

D: 1

Answer: C

Q21: If x1/2 + 1/x1/2 = 3 then find the value of x2 + 1/x2 – 49

A: 0

B: 1

C: – 1

D: – 2

Answer: D

Q22: If x + 1/x = 1 then find the value of (x6 + 1/x6)2

A: 1

B: 4

C: 2

D: 9

Answer: B

Q23: If a3 – b3 = 20 and a – b = 2 then find the value of a2 + b2

A: 10

B: 9

C: 6

D: 8

Answer: D

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Q24: If x4 + x–4 = 47 then find the value of (x – x–1)

A: 0

B: 5

C: 1

D: (5)1/2

Answer: D

Q25: If x2 + y2 = 72 and x – y = 8 then find the value of xy

A: 0

B: 4

C: 1

D: 2

Answer: B

Q26: Simplify: [a/(a+b)] + [b/(b+a)] + 1

A: 2

B: 0

C: 1

D: 3

Answer: A

Q27: If x + 1/x + 2 = 0 then the value of (x+2)2 + 1/(x+2)2 is:

A: 4

B: 2

C: 3

D: 1

Answer: B

Q28: If a = 205, b = 207 and c = 209 then find a3+b3+c3 – 3abc.

A: 7452

B: 7456

C: 7450

D: 7460

Answer: A

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Q29: If (64)1/2 × (75)1/2 = x(12)1/2, then the value of x is:

A: 25

B: 20

C: 10

D: 15

Answer: B

Q30: If a+b+c =10, ab+bc+ca = 40, a3+b3 = 71, b3+c3 = 82 and c3+a3 = 69 then what is the value of 3abc?

A: 333

B: 315

C: 311

D: 301

Answer: C